

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A differential amplitude detection diversity receiver employing maximal ratio combining MRC, comprising:

a plurality majority of decision variable calculating sections, each configured to compute computing at least one amplitude decision variable variables, said amplitude decision variable being computed by multiplying the a distance distances of a signal by an amplitude of the signal, the signal being the amplitudes of signals currently received at each antenna one or more antennas; and

an amplitude decision section configured to compose the for composing each computed amplitude decision variables variable of said plurality of decision variable calculating sections and to determine for determining said the amplitude of the received signal by selecting an amplitude candidate value, said amplitude candidate value corresponding to a certain composed amplitude decision variable from the said composed amplitude decision variables plurality of decision variable calculating sections.

Claim 2 (Currently amended): The diversity receiver of claim 1, wherein the each of said plurality of decision variable calculating section sections comprises:

a plurality majority of differential amplitude calculators Differential Amplitude Calculators (DAC) configured to calculate the for calculating an amplitude ratio ratios between the an amplitude amplitudes of the signal being received at the an (n)th sampling period and an amplitude of the signal being received at an (n-1)th sampling period, wherein n is an integer (where n is integer); and

a plurality majority of Amplitude Hypothesis Calculators amplitude hypothesis calculators (AHC) configured to for compute computing said the amplitude decision variable variables of the received signal, each of said plurality of amplitude hypothesis calculators by calculating the a distance, the distance being distances, between the said amplitude ratio ratios of the signal signals being received at each of said antenna one or more antennas, and each said amplitude candidate value, and by multiplying the distance distances by the said amplitude amplitudes of the signal signals being received at the said (n)th sampling period.

Claim 3 (Currently amended): The diversity receiver of claim 1, wherein the said amplitude decision section comprises:

an Amplitude Combiner amplitude combiner (AC) configured to compose the for composing said amplitude decision variable being variables of each antenna, computed by the each of said plurality of decision variable calculating section sections, each amplitude decision variable of said plurality of decision variable calculating

sections being composed by said amplitude combiner according to the said amplitude candidate value values; and

an Amplitude Detector amplitude detector (AD) configured to for determine determining the said amplitude of the received signal by selecting said amplitude candidate value corresponding to the said composed amplitude decision variable of each of said plurality of decision variable calculating sections, whose said composed amplitude decision variable having a magnitude, said magnitude is the being a minimum among the each of said composed amplitude decision variables variable of said plurality of decision variable calculating sections.

Claim 4 (Currently amended): A method of receiving signals using a differential amplitude detection diversity receiver employing MRC maximal ratio combining, comprising:

computing an amplitude decision variable, said amplitude decision variable being computed variables by multiplying the a distance distances between the an amplitude ratio ratios of each of the signals being received at each one or more antennas, and each an amplitude candidate value by the said amplitude amplitudes of each of the signals currently being received at each said one or more antennas antenna;

composing the said amplitude decision variable variables of each of said one or more antennas antenna, said amplitude decision variable being composed according to the said amplitude candidate value values; and

determining the said amplitude of the received signal each of the signals by selecting said amplitude candidate value corresponding to the said composed amplitude decision variable, whose said selected amplitude candidate value having a magnitude, said magnitude is the being a minimum among the said composed amplitude decision variable variables of each of the signals.

Claim 5 (Currently amended): The method of claim 4, wherein said computing computed amplitude decision variable variables comprises:

calculating the said amplitude ratio ratios between the an amplitude amplitudes of the signal signals being received at the an (n)th sampling period and an amplitude of the signals being received at an (n-1)th sampling period (where n is integer), wherein n is an integer;

calculating the distance, the distance being distances between the said amplitude ratio ratios of each of the signals being received at said one or more antennas each antenna and each said amplitude candidate value; and

computing the said amplitude decision variable variables of each of the received signal signals by multiplying the distance distances by the said amplitude of the signals being amplitudes of signals received at the said (n)th sampling period.